

## **Bolstering Age-Related Investigations with Comprehensive DNA Methylation Aging Clocks Platform**

Recently, a comprehensive DNA Methylation Aging Clocks platform, as a promising [aging research](#) technology combined with robust biologic strategies, was developed to help researchers in achieving scalable targeted methylation sequencing, high-performance DNA methylation biomarker analysis, as well as accurate age prediction of many species.

“The DNA Methylation Aging Clocks platform allows rapid scale-up to identify specific DNA methylation biomarkers of different disease types; thus, assisting the development of therapeutic agents and evaluation of drug performance. We believe this technology has the potential to help us dive deeper into age-related investigations.” Said an expert working on aging research.

[DNA Methylation Aging Clocks technology](#) is designed based on quantifying the epigenetic DNA methylation levels, measuring the accumulation of methyl groups in one's DNA molecules. This unique high-throughput sequencing allows for low-cost and scalable targeted methylation sequencing, enabling high-performance age-related DNA methylation biomarker analysis and the construction of epigenetic clocks to accurately predict age within species. Moreover, a detailed assessment of DNA methylation clocks can bring valuable insights into the aging process as well as the research of age-associated diseases.

Depending upon the DNA Methylation Aging Clocks platform, researchers can isolate the temporal and biological drivers of DNA methylation clocks, identify specific CpG sets for more robust dedicated clocks and study different mechanisms. Meanwhile, this information actively assists in the exploration of other DNA & chromatin modifications as well as other promising age-related properties that can be integrated into individual aging models. Furthermore, the automated library preparation enables researchers to process large volumes of samples efficiently, achieving low-cost investigations in flexible, reliable, and scalable sequencing manners.

To be more specific, the DNA Methylation Aging Clocks platform is able to target highly age-related loci to achieve broad biomarker identification with fewer sequencing reads, thereby shortening the project turnaround time and lowering the overall cost. Additionally, the capability of the platform covers aging-associated [DNA methylation](#) analysis to other DNA methylation biomarker analyses. In terms of final result delivery, epigenetic clocks based on genomic DNA methylation will be validated with all-inclusive mouse model experiments to guarantee data reliability.

With the help of the DNA Methylation Aging Clocks platform, the analysis workflows can be integrated for the non-bioinformatics researcher, making it faster and more convenient. Besides, the platform can also be customized or fully designed for specific aging-related projects. As a result, the DNA Methylation Aging Clocks technology is expected to receive elevated attention and application in aging research.

About the DNA Methylation Aging Clocks Technology

DNA Methylation Aging Clocks technology is acknowledged as a highly accurate molecular

correlate of chronological age in humans and other vertebrates. So far, epigenetic modifications associated with aging captured by DNA methylation clocks are pervasive and indicative of genomic, cell biology, and tissue that occurs throughout life, and these molecular alterations may accelerate aging research.